

ABSTRACT OF THE DISCLOSURE

The present invention intends to provide the partially reinforcing method and apparatus for reinforcing the required part of the metal material having good forming property and relatively low strength (hardness and yield stress) by the press processing.

The partial reinforcing method is comprised of a first step and a second step. The first press step generates a plastic strain by a plastic flow of metal material on a front surface and a rear surface of the part to be reinforced, to form a front convex-concave surface and a rear convex-concave surface. The second press step further generates the plastic strain by the plastic flow on the front convex-concave surface and the rear convex-concave surface, to form a front plane surface and a rear plane surface.